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FILE 'HOME' ENTERED AT 08:55:40 ON 27 SEP 2009

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FILE 'USPATFULL' ENTERED AT 08:56:09 ON 27 SEP 2009
CA INDEXING COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

*** YOU HAVE NEW MAIL ***

=> s probe and (EL or electroluminescent) (4a) dye
L1          37 PROBE AND (EL OR ELECTROLUMINESCENT) (4A) DYE

=> s l1 and (azole or imidazole)
L2          15 L1 AND (AZOLE OR IMIDAZOLE)

=> s l2 and detect?
L3          11 L2 AND DETECT?

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4           10 DUP REM L3 (1 DUPLICATE REMOVED)

=> d l4 bib abs 1-10

L4   ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2009 ACS on STN DUPLICATE 1
AN   2007:116984  CAPLUS
DN   146:180299
TI   Development of organic electroluminescence dye indicator for biomolecules
IN   Isobe, Shinichiro
PA   Japan
SO   PCT Int. Appl., 94pp.
     CODEN: PIXXD2
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
     ---------------     ----   --------    --------------------    --------
PI   WO 2007013601        A1    20070201    WO 2006-JP315008        20060728
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
             KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN,
             MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU,
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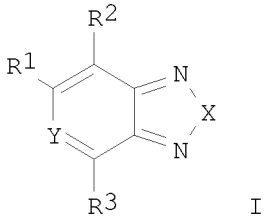
SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG,
US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM

EP 1932888	A1	20080618	EP 2006-781918	20060728	
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR					
IN 2008CN00461	A	20080919	IN 2008-CN461	20080128	
KR 2008038183	A	20080502	KR 2008-704688	20080227	
CN 101273096	A	20080924	CN 2006-80035218	20080324	
PRAI JP 2005-219218	A	20050728			
JP 2006-25658	A	20060202			
WO 2006-JP315008	W	20060728			

OS MARPAT 146:180299
GI



I

AB Azole electroluminescence dye indicators having spacer regions for nucleic acids and proteins have been developed. The EL dyes have general structures I (R1,R4 = H, halo, alkyl, alkenyl, alkoxy, OH, CN, sulfonyl, aromatic, heterocyclic; R2,R3 = R1, thiophene, furan, pyrrole, imidazole, oxazole, thiazole, pyrazoles, pyridines, sulfonyl aryl; X = N, S, O, Se, B with(out) substitution; Y = CR4, N, N+R'; R' = alkyl, alkyaryl; An- = Cl-, Br-, I-, CF3SO3-, BF4-, PF6-). The EL dyes addnl. comprise a spacer region -(CHR')p-X-(CHR'')q- (X = NHCOO, CONH, COO, SO2NH, NHC(:NH)NH, O, S, NR, CH:CH, C.tplbond.C, Ar, CO-Ar-NR; R = alkyl; R', R'' = H, alkyl with(out) aromatic rings and they can contain sulfonyl, OH, quaternary amines, CO2H; Ar = aryl; p, q = 0 .apprx. 20; p + q ≥ 1), amino acid, or peptides (such as peptides containing cysteic acid, 2-amino-3-sulfosulfanyl propanoic acid, 2-amino-3-sulfoxypropanic acid, tyrosine, threonine, 4-amino-2-hydroxybutanoic acid, homoserine or serine). The indicators have reactive moiety for labeling that consist of carboxylic acid, isocyanate, isothiocyanate, epoxy, alkyl halides, triazine, or carbodiimide. The indicators can be applied to various biomols. involved in specific binding process they include oligonucleotide probes, nucleotide amplification primers or terminators, PNA mol. beacons, proteins (antigens, haptens and antibodies), biotin or avidins, tag peptide, lectin, glycoproteins, hormones and receptors. The systems using electrophoresis are especially claimed as the method to detect the indicator-labeled biomols. Syntheses of some specific EL dyes and labeling of oligo DNA and proteins were demonstrated.

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 10 USPATFULL on STN
AN 2007:217586 USPATFULL

TI Coded Molecules for Detecting Target Analytes
IN Livak, Kenneth J., San Jose, CA, UNITED STATES
PA Applera Corporation, Foster City, CA, UNITED STATES (U.S. corporation)
PI US 20070190543 A1 20070816
AI US 2006-559880 A1 20061114 (11)
PRAI US 2005-736960P 20051114 (60)
DT Utility
FS APPLICATION
LREP DECHERT LLP, P.O. BOX 10004, PALO ALTO, CA, 94303, US
CLMN Number of Claims: 86
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)
LN.CNT 3721
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present disclosure relates to methods of detecting target analytes based on single molecule detection of coded molecules.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 3 OF 10 USPATFULL on STN
AN 2007:177073 USPATFULL
TI Method for detecting biomolecule, labeling dye used therefore, and labeling kit
IN Isobe, Shinichiro, Fukuoka, JAPAN
PI US 20070154890 A1 20070705
AI US 2004-584089 A1 20041222 (10)
WO 2004-JP19215 20041222
20060809 PCT 371 date
PRAI JP 2003-427268 20031224
DT Utility
FS APPLICATION
LREP WENDEROTH, LIND & PONACK, L.L.P., 2033 K STREET N. W., SUITE 800, WASHINGTON, DC, 20006-1021, US
CLMN Number of Claims: 29
ECL Exemplary Claim: 1-21
DRWN 8 Drawing Page(s)
LN.CNT 1198
AB The present invention provides a method for detecting a biomolecule. The method includes reacting a biomolecule sample with an organic EL-dye and measuring the fluorescence of the biomolecule sample labeled with the organic EL-dye. The method provides a highly sensitive method of detecting a biomolecule at lower cost.

L4 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2006:269311 CAPLUS
DN 144:325826
TI Development of double stranded DNA intercalating organic electroluminescence probe for gene detection assay
IN Isobe, Shinichiro
PA Japan
SO PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006030788	A1	20060323	WO 2005-JP16847	20050913

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRAI JP 2004-267061 A 20040914

AB Double stranded DNA-intercalating organic electroluminescence probes for gene detection assay have been developed. The sewn-in type DNA-intercalating probe is consisted of organic electroluminescence pigment, DNA binding moiety and the linker region. The organic electroluminescence pigments are five-membered ring compds. with conjugated bonds. Such five-membered rings are consisted of more than one hetero atom (azole or imidazole), selenium or boron atom, or those condensed with six-membered ring compds. with conjugated bonds. The DNA binding moiety is single ring compds. or polyarom. compds. The DNA binding moieties can be more specifically the chemical groups such as anthracene, phenanthrene, pyrene, fluorene, biphenylene, naphthalenediimide, naphthaleneimide, acridine, phenyldiimide, benzothiazole, benzoimidazole, quinoline, phenanthridine or indole. The binding moiety can be peptides contain lysine, arginine, histidine or ornithine. A naphthalenediimide and an anthracene intercalators, a peptide intercalator were synthesized and fluorometries using these probes to detect dsDNA were demonstrated. The fluorescent signals from these probes were proved to be stable even in the dry state.

OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 10 WPIDS COPYRIGHT 2009 THOMSON REUTERS on STN

AN 2005-522257 [53] WPIDS

DNC C2005-158451 [53]

DNN N2005-426610 [53]

TI Detecting biomolecules e.g. nucleic acid and protein, involves reacting biomolecule sample and organic electroluminescent (EL) dye, and measuring fluorescence of biomolecule sample labeled with EL dye

DC B04; D16; S03

IN ISOBE S

PA (ISOB-I) ISOBE S; (MATA-I) MATAKA S; (TAKE-I) TAKENAKA S

CYC 106

PIA WO 2005062046 A1 20050707 (200553)* JA 67[13]
JP 2005208026 A 20050804 (200553) JA 28
US 20050181380 A1 20050818 (200555) EN
US 7015002 B2 20060321 (200621) EN
EP 1712911 A1 20061018 (200669) EN
JP 3881667 B2 20070214 (200714) JA 29
CN 1902490 A 20070124 (200740) ZH
US 20070154890 A1 20070705 (200746) EN
KR 2007003827 A 20070105 (200755) KO
IN 2006CN02338 P4 20070706 (200769) EN
JP 2005516510 X 20071213 (200801) JA 49

ADT WO 2005062046 A1 WO 2004-JP19215 20041222; JP 2005208026 A JP 2004-105187 20040331; JP 3881667 B2 JP 2004-105187 20040331; US 20050181380 A1 US 2004-822775 20040413; US 7015002 B2 US 2004-822775 20040413; CN 1902490 A

CN 2004-80038772 20041222; EP 1712911 A1 EP 2004-807572 20041222; EP 1712911 A1 WO 2004-JP19215 20041222; US 20070154890 A1 WO 2004-JP19215 20041222; KR 2007003827 A WO 2004-JP19215 20041222; IN 2006CN02338 P4 WO 2004-JP19215 20041222; IN 2006CN02338 P4 IN 2006-CN2338 20060626; KR 2007003827 A KR 2006-714817 20060721; US 20070154890 A1 US 2006-584089 20060809; JP 2005516510 X WO 2004-JP19215 20041222; JP 2005516510 X JP 2005-516510 20041222

FDT JP 3881667 B2 Previous Publ JP 2005208026 A; EP 1712911 A1 Based on WO 2005062046 A; KR 2007003827 A Based on WO 2005062046 A; JP 2005516510 X Based on WO 2005062046 A

PRAI JP 2003-427268 20031224
JP 2004-105187 20040331

AN 2005-522257 [53] WPIDS

AB WO 2005062046 A1 UPAB: 20051223

NOVELTY - Detecting (M1) a biomolecule, involves reacting the biomolecule sample and an organic electroluminescent (EL) dye, and measuring the fluorescence of the biomolecule sample labeled with the EL dye.

DETAILED DESCRIPTION - Detecting (M1) a biomolecule, involves:

(1) reacting the biomolecule sample and an organic electroluminescent (EL) dye, and measuring the fluorescence of the biomolecule sample labeled with the EL dye;

(2) labeling biomolecule sample with a signal coloration element having a five membered ring compound containing one or more types of heteroatom and selenium or boron atom, and measuring the fluorescence of the labeled biomolecule;

(3) reacting biomolecule sample and probe labeled with organic EL dye, and measuring fluorescence of the biomolecule sample; or

(4) separating the biomolecules contained in the biomolecules sample based on their size by electrophoresis, where the sample is labeled with an organic EL dye before or after the electrophoresis.

INDEPENDENT CLAIMS are also included for:

(1) signal coloration element for (M1), comprising an organic EL dye having a reactive group for binding a biomolecule;

(2) labeling kit for labeling biomolecules, comprising organic EL dye;

(3) a method (M2) for labeling tissue or cell sample comprising biomolecule with an organic EL dye; and

(4) dye for labeling tissue or cell sample, comprising an organic EL dye having a reactive group for binding a biomolecule in the tissue or cell.

USE - (M1) is useful for detecting biomolecules such as nucleic acid, protein, peptides and carbohydrates (claimed).

ADVANTAGE - (M1) enables detection of several biomolecules simultaneously with more sensitivity at lower cost. The organic EL dye is chemically stable for freeze-drying and can be stored for long term, and has high quantum yield in solid state and has high fluorescent intensity.

L4 ANSWER 6 OF 10 USPATFULL on STN

AN 2005:208900 USPATFULL

TI Method of detecting biological molecules, and labeling dye and labeling kit used for the same

IN Isobe, Shinichiro, Fukuoka-shi, JAPAN

PI US 20050181380 A1 20050818
US 7015002 B2 20060321

AI US 2004-822775 A1 20040413 (10)
PRAI JP 2003-427268 20031224
JP 2004-105187 20040331
DT Utility
FS APPLICATION
LREP WENDEROTH, LIND & PONACK, L.L.P., 2033 K STREET N. W., SUITE 800, WASHINGTON, DC, 20006-1021, US
CLMN Number of Claims: 13
ECL Exemplary Claim: 1-20
DRWN 6 Drawing Page(s)
LN.CNT 817
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a method of detecting a biological molecule. The method includes reacting a biological molecule sample with an organic EL-dye and measuring the fluorescence of the biological molecule sample labeled with the organic EL-dye. The method provides a highly sensitive method of detecting a biological molecule at lower cost.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 7 OF 10 USPATFULL on STN
AN 1998:68531 USPATFULL
TI Non-azo naphtalimide dyes and uses for same
IN Lewis, David E., Brookings, SD, United States
Utecht, Ronald E., Volga, SD, United States
Judy, Millard M., Dallas, TX, United States
Matthews, J. Lester, Dallas, TX, United States
PA MicroBioMed Corporation, Dallas, TX, United States (U.S. corporation)
PI US 5766600 19980616
AI US 1995-433093 19950503 (8)
RLI Division of Ser. No. US 1993-103924, filed on 9 Aug 1993, now patented, Pat. No. US 5420136 76 Ser. No. US 1992-854416, filed on 19 Mar 1992, now patented, Pat. No. US 5235045
DT Utility
FS Granted
EXNAM Primary Examiner: Achutamurthy, Ponnathapura
LREP Hitt Chwang & Gaines, P.C.
CLMN Number of Claims: 24
ECL Exemplary Claim: 1
DRWN 57 Drawing Figure(s); 15 Drawing Page(s)
LN.CNT 2371
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A class of predominantly hydrophobic non-azo N-substituted 1,8-naphthalimide compounds, each bearing, at its 3-position, a nucleofuge and, at its 4-position, a heteroatomic electron-releasing group. The heteroatomic electron-releasing group is being characterized as having a heteroatom directly linked to the 4-position of the ring, and having at least one hydrogen directly attached to the heteroatom. Upon activation by an activating agent in an environment independent of the presence or absence of oxygen, these compounds generate activated species. The activated species initiate chemical changes in lipid bilayer membranes of viruses and other target cells. These changes can eradicate viruses and other target cells. The activated species can also cause structural changes in lipid and any associated proteins and polypeptides at a level beneath the surface of the membrane, leading to polymerization and crosslinking.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 8 OF 10 USPATFULL on STN

AN 96:94680 USPATFULL
TI Non-azo naphthalimide dyes and uses for same
IN Lewis, David E., Brookings, SD, United States
Utecht, Ronald E., Volga, SD, United States
Judy, Millard M., Dallas, TX, United States
Matthews, J. Lester, Dallas, TX, United States
PA MicroBioMed Corporation, Dallas, TX, United States (U.S. corporation)
PI US 5565551 19961015
AI US 1995-433092 19950503 (8)
RLI Division of Ser. No. US 1993-103924, filed on 9 Aug 1993, now patented, Pat. No. US 5420136 which is a division of Ser. No. US 1992-854416, filed on 19 Mar 1992, now patented, Pat. No. US 5235045
DT Utility
FS Granted
EXNAM Primary Examiner: Higel, Floyd D.
LREP Hitt Chwang & Gaines, P.C.
CLMN Number of Claims: 14
ECL Exemplary Claim: 1,7
DRWN 57 Drawing Figure(s); 15 Drawing Page(s)
LN.CNT 2380
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A class of predominantly hydrophobic non-azo N-substituted 1,8-naphthalimide compounds, each bearing, at its 3-position, a nucleofuge and, at its 4-position, a heteroatomic electron-releasing group. The heteroatomic electron-releasing group is being characterized as having a heteroatom directly linked to the 4-position of the ring, and having at least one hydrogen directly attached to the heteroatom. Upon activation by an activating agent in an environment independent of the presence or absence of oxygen, these compounds generate activated species. The activated species initiate chemical changes in lipid bilayer membranes of viruses and other target cells. These changes can eradicate viruses and other target cells. The activated species can also cause structural changes in lipid and any associated proteins and polypeptides at a level beneath the surface of the membrane, leading to polymerization and crosslinking.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 9 OF 10 USPATFULL on STN
AN 95:47732 USPATFULL
TI Eradication of pathogenic biological contaminants using non-azo naphthalimide dyes
IN Lewis, David E., Brookings, SD, United States
Utecht, Ronald E., Volga, SD, United States
Judy, Millard M., Dallas, TX, United States
Matthews, J. Lester, Dallas, TX, United States
PA MicroBioMed Corporation, Dallas, TX, United States (U.S. corporation)
PI US 5420136 19950530
AI US 1993-103924 19930809 (8)
RLI Division of Ser. No. US 1992-854416, filed on 19 Mar 1992, now patented, Pat. No. US 5235045
DT Utility
FS Granted
EXNAM Primary Examiner: Higel, Floyd D.
LREP Konneker, Bush Hitt & Chwang
CLMN Number of Claims: 24
ECL Exemplary Claim: 1,7
DRWN 57 Drawing Figure(s); 15 Drawing Page(s)
LN.CNT 2323
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A class of predominantly hydrophobic non-azo N-substituted

1,8-naphthalimide compounds, each bearing, at its 3-position, a nucleofuge and, at its 4-position, a heteroatomic electron-releasing group. The heteroatomic electron-releasing group is being characterized as having a heteroatom directly linked to the 4-position of the ring, and having at least one hydrogen directly attached to the heteroatom. Upon activation by an activating agent in an environment independent of the presence or absence of oxygen, these compounds generate activated species. The activated species initiate chemical changes in lipid bilayer membranes of viruses and other target cells. These changes can eradicate viruses and other target cells. The activated species can also cause structural changes in lipid and any associated proteins and polypeptides at a level beneath the surface of the membrane, leading to polymerization and crosslinking.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 10 OF 10 USPATFULL on STN
AN 93:65515 USPATFULL
TI Non-azo naphthalimide dyes
IN Lewis, David E., Brookings, SD, United States
Utecht, Ronald E., Volga, SD, United States
Judy, Millard M., Dallas, TX, United States
Matthews, J. Lester, Dallas, TX, United States
PA MicroBioMed Corporation, Dallas, TX, United States (U.S. corporation)
PI US 5235045 19930810
AI US 1992-854416 19920319 (7)
DT Utility
FS Granted
EXNAM Primary Examiner: Higel, Floyd D.
LREP Winstead Sechrest & Minick
CLMN Number of Claims: 35
ECL Exemplary Claim: 1,23
DRWN 57 Drawing Figure(s); 15 Drawing Page(s)
LN.CNT 3311
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A class of predominantly hydrophobic non-azo N-substituted 1,8-naphthalimide compounds, each bearing, at its 3-position, a nucleofuge and, at its 4-position, a heteroatomic electron-releasing group. The heteroatomic electron-releasing group is being characterized as having a heteroatom directly linked to the 4-position of the ring, and having at least one hydrogen directly attached to the heteroatom. Upon activation by an activating agent in an environment independent of the presence or absence of oxygen, these compounds generate activated species. The activated species initiate chemical changes in lipid bilayer membranes of viruses and other target cells. These changes can eradicate viruses and other target cells. The activated species can also cause structural changes in lipid and any associated proteins and polypeptides at a level beneath the surface of the membrane, leading to polymerization and crosslinking.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.